

REMARKS

Claims 1-4 and 6-21 are pending in this application, with Claims 1, 6, 7, 13, 14, 15, 19, and 21 amended and Claim 5 canceled. Applicants respectfully request reconsideration and review of the application in light of the foregoing amendments and following remarks.

Before addressing the merits of the rejections, Applicants provide the following brief description of the invention. The invention is directed to a method and system for wirelessly communicating identifying information from model vehicles to a remote control device. In the field of model railroading, it is known to use a remote control device to communicate commands to model vehicles operating on a layout. Since there may be plural model trains operating on the layout simultaneously, the remote control device includes an identifier (ID) with each such command so that only the appropriate model train will execute the command. There are many different types of model trains available on the market that may be controlled by the remote control, with many such model trains having distinctive functionality and other characteristics, and so there is a need in the art for a method for introducing the model train to the remote control so that the remote control knows to communicate with that particular model train. A known method for accomplishing this is for the operator to manually enter identifying information (such as the ID as well as a road name, tail number, etc.) into the remote control using a keypad provided on the remote control. This method is undesirable for some model railroading enthusiasts.

The invention overcomes this drawback in the art by providing the model train and remote control with a system and method for wirelessly communicating the identifying information to the remote control. This way, the remote control can readily and easily recognize the model train, and thereafter use the ID in commands communicated to the various model trains operating on the layout. To ensure that the remote control only receives the ID from one model train at a time, the invention provides that the ID is transmitted from the model train using only a narrow spatial field,

e.g., using an infrared signal. Moreover, in an embodiment of the invention, the transmission channel used to communicate the ID is different than that used for communication of subsequent commands. Applicants have amended the claims to clarify certain of these aspects of the invention.

The Examiner rejected Claims 1-17, 19 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Nagata in view of Borgstahl and the admitted prior art. The Examiner also rejected Claims 18 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Nagata and Borgstahl in view of Young. Applicants respectfully traverse these rejections.

As discussed previously, Nagata discloses a system that enables the targeted control of one drive from a multitude of drives by addressing commands with the identification information for the targeted drive (see FIG. 1 and col. 3, lines 31-44). As such, the user of the Nagata system may select a particular drive to control by inputting its identification information on the remote control (i.e., by inputting the transmitter ID and car number using switches 29 and 30) and transmitting a command containing the identification information to be acted upon by the targeted drive and ignored by other drives (see FIG. 2 and col. 4, lines 42-54). But, Nagata differs from the invention in two important respects. First, the remote control in Nagata assigns the ID to the drives, unlike the invention in which the model trains have unique IDs that are transmitted to the remote control. Second, the drives in Nagata do not have any ability to transmit information to the remote control, but rather the flow of information is unidirectional from the remote control to the drive. Hence, the Nagata drives cannot transmit an ID to the remote control.

Borgstahl discloses a personal area network in which appliances may be programmed or controlled using a controller. Low power wireless communication links create a detection zone around each of a multitude of peers, which may be an appliance or a controller. When the detection zone of a controller peer overlaps with that of an appliance peer, the two peers establish a communications link that allows the

controller to program or otherwise control the functions of the appliance. (See FIGS. 1 and 6, col. 4, line 57 to col. 5, line 29, and col. 7, line 62 to col. 8, line 4). To the extent understood, the Examiner appears to rely on Borgstahl merely for its disclosure of a bidirectional link; however, there is no evidence of record that Borgstahl makes up for the deficiencies of Nagata discussed above.

Specifically, Borgstahl fails to suggest or disclose the inclusion of two distinct communication links between the remote control and the control object (*i.e.*, the model train). Borgstahl similarly fails to disclose a control object that communicates an identifier to a remote control over a spatially narrow communication link. Instead, Borgstahl discloses communication of all information between peers through a common communications link. In this regard, Borgstahl teaches away from the proposed combination. Even if combined as proposed, the combination of references fails to suggest or disclose the invention.

Further, the Examiner's statement of motivation to combine the references misses the mark. According to the Examiner, "it would have been obvious to one of ordinary skill in the art at the time of the invention to have had a bi-directional link for programming the train of Nagata since this would expand the control capabilities for complex trains while also requiring less memory and processing power in the actual train itself since more intelligence would be in the controller as suggested by Borgstahl." Respectfully, the invention is not about providing bidirectional communications for expanding "control capabilities" while "requiring less memory and processing power." To the contrary, the invention provides a first, highly-directional communication link to transmit an ID from the model train to the remote control, and a second, omnidirectional link to transmit command information from the model train to the remote control. The purpose of the first communication link is to simplify the process of identifying a model train to the remote control. This is not taught by either reference, and the proposed combination of references therefore fails to suggest or disclose the invention.

Applicants note that the Examiner took official notice of certain facts, including the use of barcodes as an identifier with respect to Claim 8 and the selection of the location of elements with respect to Claim 17. Applicants fail to see the relevance of the officially noticed facts to either of the claims at issue. Claim 8 does not recite a barcode. In the model train art, it is desirable that the exterior physical features of the model train conform as closely to the authentic train as possible, and the incorporation of a barcode symbol onto the exterior would detract from the aesthetic design of the model train. Similarly, in Claim 17, the location of the transmitter in the windshield of the train serves the same purpose of concealing the transmitter and thereby not detract from the aesthetic design of the model train. Thus, Applicants consider the officially noticed facts to not support the Examiner's assertion of obviousness. To the extent that the Examiner persists in reliance of these officially noticed facts, Applicants request that such facts be supported by evidence that shows their relation to the claims at issue.

Young is cited merely for its disclosure of communication of signals over the tracks, and otherwise fails to make up for the deficiencies of Nagata and Borgstahl.

Turning to the claims, the proposed combination of references fails to suggest or disclose, *inter alia*, "transmitting an identifying signal (ID) from said first device to said remote control device, wherein said remote control device is only capable of receiving said ID for said first device when said remote control device is placed within a narrow spatial field emanating from said first device, so that said ID is not interfered with by transmissions from other devices," as defined in Claim 1. As discussed above, neither reference discloses communicating an ID from a control object to a remote control over a narrow, dedicated communication channel separate from a main channel used for communication of commands.

Likewise, the proposed combination of references fails to suggest or disclose, *inter alia*, "periodically transmitting from a first model train an ID for said first model train in a limited field infrared transmission; [and] positioning a remote control device near said first model train so that only a transmission from said first model train is received by

an infrared receiver in said remote control device," as defined in Claim 13. Neither reference discloses communication of an ID from a model train to a remote control device via a limited field infrared transmission.

The proposed combination of references further fail to suggest or disclose, *inter alia*, "a transmitter mounted in said vehicle for directing a transmission of an identifying signal (ID) that can be received by said remote control unit independent of said communication channel; and means for limiting said transmission so that only a narrow transmission from a single vehicle is received by said remote control unit when positioned in a field of said transmission," as defined in Claim 14. Neither reference discloses a vehicle having a transmitter that communicates an ID independent of a primary communication channel.

The proposed combination of references further fail to suggest or disclose, *inter alia*, "a receiver mounted in said remote control device, for receiving a transmission from said first model vehicle, separate from said communication channel, conveying an ID of said first model vehicle," as defined in Claim 19. Neither reference discloses a remote control device having a receiver that receives an ID independent of a primary communication channel.

Lastly, the proposed combination of references fail to suggest or disclose, *inter alia*, "a first model vehicle including a processor configured to receive commands via a first communication channel, a transmitter mounted in said first model vehicle for directing a transmission of an identifier (ID) that can be received independent of said first communication channel, and means for limiting said transmission so that only a narrow transmission from the first model vehicle is received by a receiver positioned in said field of said transmission," as defined in Claim 21. Neither reference discloses a vehicle having a transmitter that communicates an ID over a narrow transmission path independent of a primary communication channel.

For the foregoing reasons, the Examiner failed to establish a *prima facie* case of obviousness, mandating withdrawal of the rejections of Claims 1-4 and 6-21.

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In view of the foregoing, the Applicants respectfully submit that Claims 1-4 and 6-21 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. If it would be helpful to placing this application in condition for allowance, the Applicants encourage the Examiner to contact the undersigned counsel and conduct a telephonic interview.

To the extent necessary, Applicants petition the Commissioner for a two-month extension of time, extending to March 26, 2007 (the first business day following March 25, 2007), the period for response to the Office Action dated October 24, 2006. The Commissioner is authorized to charge \$225. for the two-month extension of time pursuant to 37 CFR §1.17(a)(2) and any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,



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